(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/035238 A1

(51) International Patent Classification7:

B09B 3/00

(21) International Application Number:

PCT/AU2003/001390

(22) International Filing Date: 20 October 2003 (20.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2002952159

18 October 2002 (18.10.2002) AU

- (71) Applicant (for all designated States except US): REGAIN TECHNOLOGIES PTY LTD [AU/AU]; 16/456 St Kilda Rd, Melbourne, Victoria 3004 (AU).
- (72) Inventors; and

٥

(75) Inventors/Applicants (for US only): COOPER, Bernard, John [AU/AU]; 2 Church Square, St Kilda, Victoria 3182 (AU). COOPER, Kevin, Michael [AU/AU]; GO1/8 King Street, Newcastle, New South Wales 2300 (AU). COOPER, Brendan, Gerard [AU/AU]; 383 Mickleham Road, Tullamarine, Victoria 3034 (AU). COOPER, John,

Joseph [AU/AU]; 34 Links Road, Darley, Bacchus Marsh, Victoria 3340 (AU).

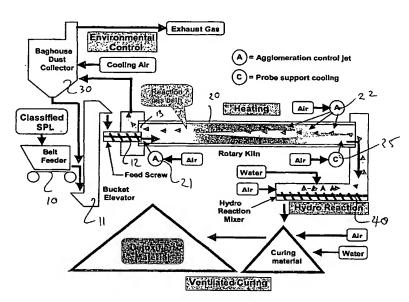
- (74) Agent: GRIFFITH HACK; GPO Box 1285k, L3, 509 St Kilda Rd, Melbourne, Victoria 3001 (AU).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: TREATMENT OF SMELTING BY-PRODUCTS



Process Plant Schematic

(57) Abstract: A method of treating a spent potliner after use in an aluminium smelting process, the method comprising crushing and classifying the spent potliner, placing the classified and crushed spent potliner in a furnace at a temperature greater than 450 °C, heating the spent potliner to a temperature greater than 450 °C, mixing the heated spent potliner with water to produce reaction gases and residue, burning the reaction gases, mixing the residue with water in a well ventilated area for a period of weeks to cure the residue. The method also embraces blending the cured residue with other chemicals and minerals to provide specific mineral products.